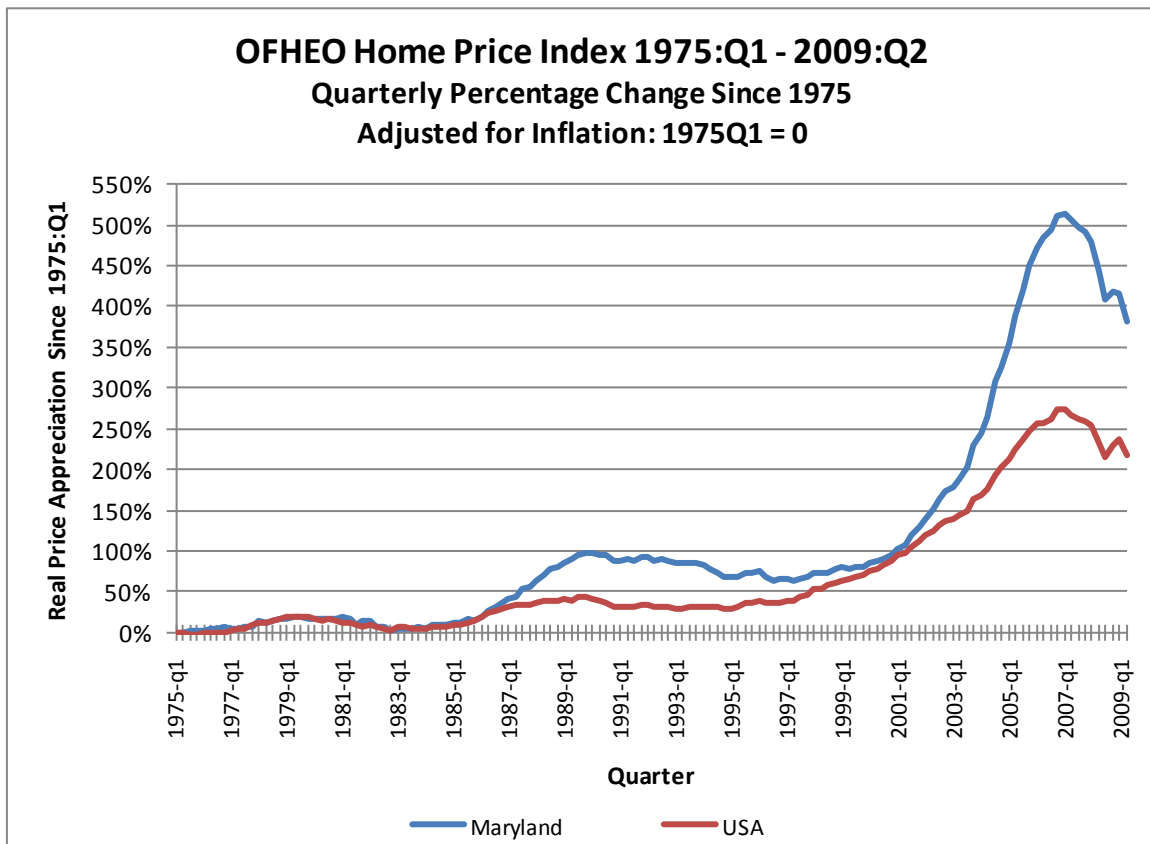


The House Price Index (HPI) for All Mortgage Types for Maryland, 1975 – 2009

Decrease in Existing Home Values Continues in Maryland and the U.S.

After an historical run-up in housing prices that peaked in the first quarter of 2007, valuations of existing single-family homes in Maryland have now fallen by 18.3 percent when accounting for inflation, according to the Federal Home Finance Agency's All Transactions House Price Index for the second quarter of 2009.¹ Still, even after this drop, housing prices in Maryland are about where they were in the second quarter of 2005, and remain 82.0 percent above where they were at the beginning of 2000. Nationally, housing valuations decreased 11.3 percent after their peak (also in the first quarter of 2007) and are now also roughly equal to second quarter 2005 valuations.



Source: Quarterly House Price Index, First Quarter 2009, Federal Housing Finance Agency, 2009

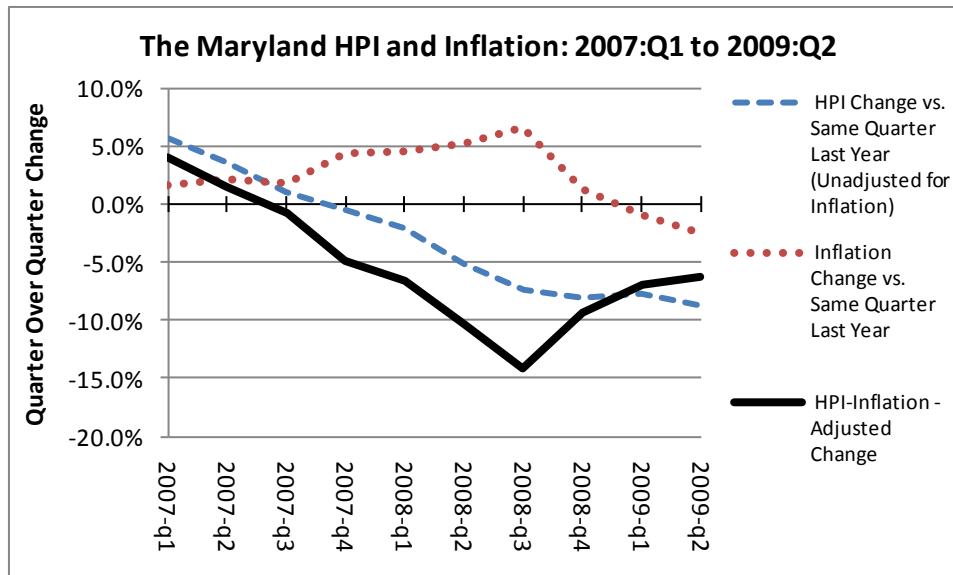
Rapid Rise and Fall

Like the rest of the country, Maryland experienced a significant rise in housing unit valuations from the late 1990s to the mid-2000's. This is the latest and largest in a series of housing value booms and busts that have affected Maryland for the last 35 years. According to the House Price Index (HPI) published by the Federal Home Finance Agency (FHFA), the inflation-adjusted valuation of existing single-family detached homes in Maryland increased 512.6 percent from the first quarter of 1975 (the start of the data series) to

¹ This data tracks the valuation of existing single-family homes over time for which two mortgages were originated and subsequently purchased by Freddie Mac or Fannie Mae since July 1975. Mortgages may be for purchases of housing units or for refinancing of existing mortgages. See page 8 for a more complete explanation.

the first quarter of 2007, with almost all of this gain since mid-1997. While this most recent cycle of increasing home valuations started in the second quarter of 1997, it truly accelerated after the first quarter of 2001, when home values had finally regained what they had lost after the last appreciation cycle ended in the first quarter of 1992.

Current price appreciation peaked in the first quarter of 2007 for both Maryland and the U.S., with the real gain for Maryland since 1975 (512.6%) far surpassing the national gain (274.8%) (See [Table 1](#)). Since 2007:Q1, the value of Maryland's existing single-family detached housing units has depreciated 18.3 percent, while national values have fallen by 11.3 percent. While the inflation-adjusted HPI data for Maryland showed an improvement from 2008:Q4 to 2009:Q1, it was caused by variations in quarterly



inflation rates (increases caused by the run-up in oil prices in mid-2008 and decreases caused by their subsequent fall in late 2008 and the concurrent economic slowdown). As the chart to the left shows, the All Transactions House Price Index (HPI) has declined steadily since 2007:Q1, while inflation spiked to a 6.7 percent quarter-over-quarter change in

the third quarter of 2008. Since then, the rate of inflation has slowed and even turned into deflation in the first and second quarters of 2009.

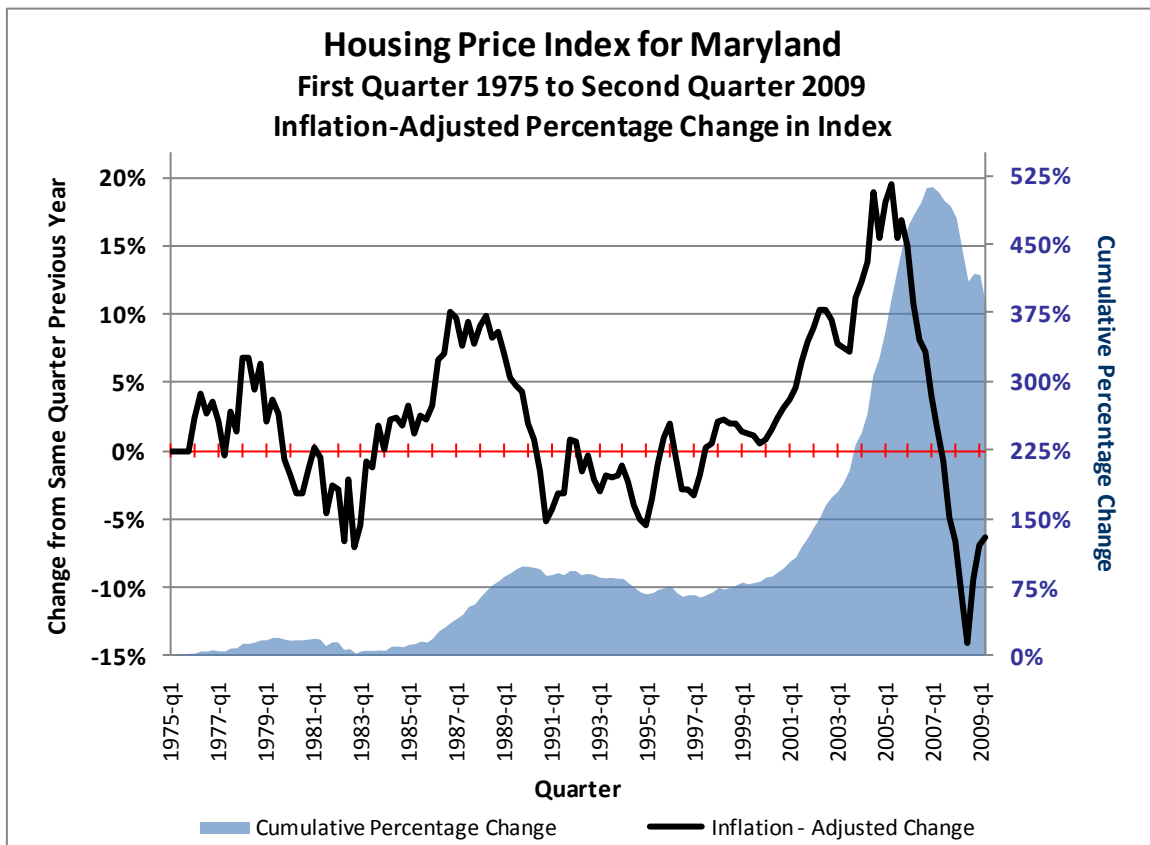
Previous Booms and Busts

Looking at the All Transactions HPI's quarter-over-quarter change rate (which compares a quarter to the same quarter in the previous year) shows a strong pattern of booms and busts in housing price appreciation in Maryland. In the mid-to-late 1970's, housing prices generally appreciated on a quarter-over-quarter basis, peaking at a 6.8 percent rate between 1977:Q1 and 1978:Q1 after adjusting for inflation. This led to a peak cumulative percentage increase of 19.6 percent from 1975:Q1 to 1979:Q3, after which real prices began to depreciate. This period of depreciation lasted 16 quarters, reaching a nadir of a 7.1 percent quarter-over quarter decline from 1981:Q4 to 1982:Q4. By the end of this period of depreciation in 1983:Q3, home values had lost most of their cumulative 19.6 percent appreciation, being worth only 5.2 percent more than they were in 1975:Q1. In other words, an average single-family house that was valued at \$100,000² in 1975:Q1 would have been valued at \$119,600 at the 1979:Q3 peak and then reduced in value to \$105,200 by 1983:Q3.

² All dollar figures are in inflation-adjusted (constant) dollars, adjusted to 2009:Q2.

By 1983:Q4, this depreciation trend had reversed and housing values grew positively for the next 27 quarters, peaking at a 10.2 percent quarter-over-quarter growth rate from 1985:Q4 to 1986:Q4. By 1990:Q1, price appreciation rates had begun to slow again, and this period of value appreciation ended in 1990:Q2 with a cumulative increase of 96.2 percent over 1975:Q1. At this point, the theoretical \$100,000 single family detached house in 1975 would have been valued at \$196,200 in real dollars after accounting for inflation.

After this peak, quarter-over-quarter growth turned sharply negative by 1990:Q4, reaching a low of -5.2 percent. Home valuations depreciated in twenty-four of the 28 quarters from 1990:Q3 to 1997:Q2, which essentially brought cumulative house price appreciation back to where it had been in 1988:Q1. Even with this moderate loss in house price appreciation, existing single-family detached homes in Maryland had still kept most of the value gained during the 1983:Q4 to 1990:Q2 period of price appreciation (which peaked at a cumulative 97.8 percent in 1989:Q4 as compared to 1975:Q1), retaining 63.8 percent of the value gained since 1975:Q1, meaning that the \$100,000 house was now valued at \$163,800.



Source: Quarterly House Price Index, First Quarter 2009, Federal Housing Finance Agency, 2009

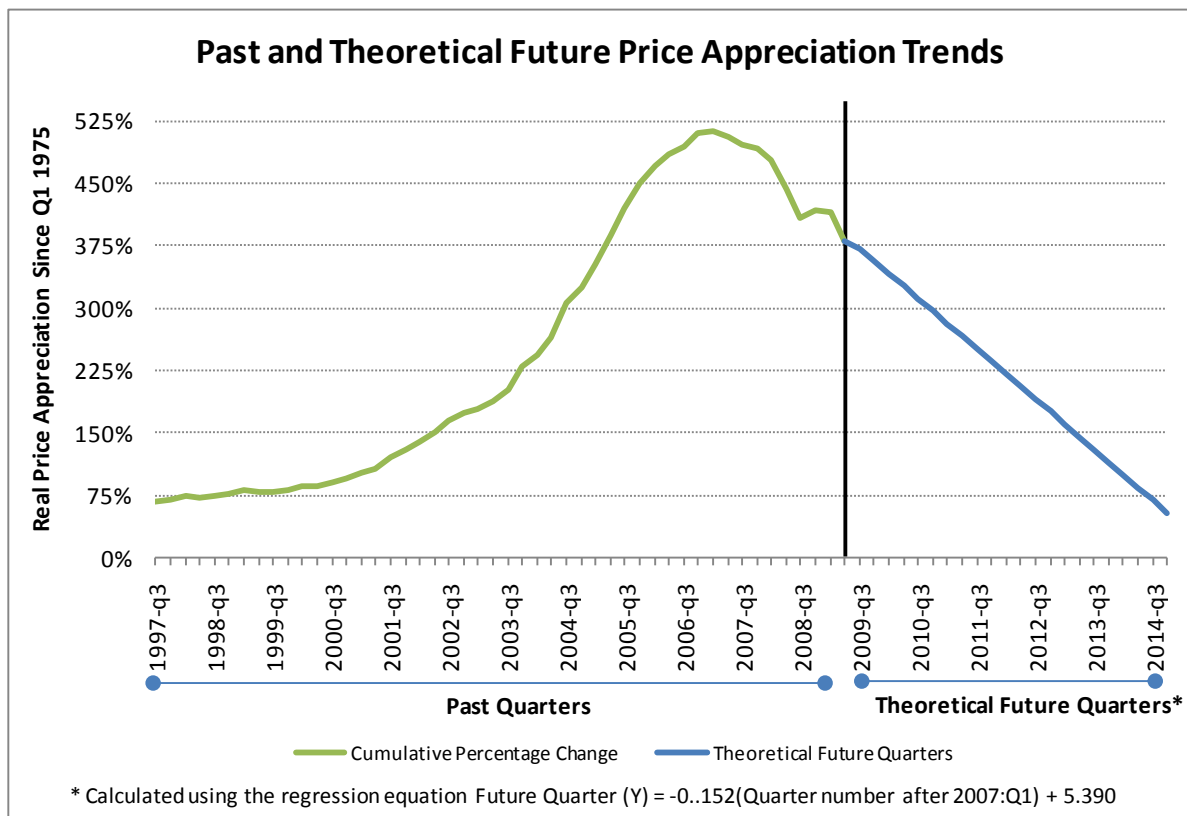
Ten Years of Value Appreciation

The second quarter of 1997 represented another trough, and price appreciation once again turned positive by the third quarter of 1997. For the next 40 quarters Maryland saw the most consistent increase in housing price appreciation since the start of this data series in 1975:Q1. By 2001:Q4 quarterly price appreciation rates exceeded the highest rate seen from 1975 to 1978, and in 2002:Q2 appreciation rates exceeded the peak rate in the 1983 to 1990 period. From 2002:Q2 to 2007:Q2, 13 of 21 quarters showed

quarter-over-quarter price appreciation rates in the double digits, peaking at a 19.6 percent price appreciation rate between 2004:Q2 and 2005:Q2. This sustained period of high growth rates pushed cumulative house price appreciation to the 2007:Q1 peak of 512.6 percent over 1975:Q1. In other words, the theoretical \$100,000 house in 1975:Q1 would have been valued at \$612,600 by 2007:Q1.

Value Appreciation Peak and Current Decline

By 2007:Q3 this sustained period of high price appreciation was over, and had started turning into a period of rapid price depreciation. By 2008:Q1, quarter over quarter depreciation rates had exceeded those in the 1990 to 1997 period (-6.7% in 2008:Q1 vs -5.5% in 1995:Q1) and by 2008:Q2 they had exceeded depreciation rates in the 1980 to 1983 period (-10.4% in 2008:Q2 vs -7.1% in 1982:Q4) and had marked the most rapid rate of quarter over quarter depreciation in Maryland during this time series. By 2008:Q3, inflation-adjusted quarter-over-quarter house price depreciation for single family homes in Maryland had set a new low, falling to -14.1 percent (-7.4% current HPI home price depreciation plus a 6.7% consumer price inflation rate), the lowest rate ever recorded for Maryland in the HPI data. By 2008:Q4 this rapid rate of depreciation had decreased slightly to -9.4 percent due to a lessening of inflation (-8.1 percent HPI depreciation plus only 1.4 percent inflation), and by 2009:Q2 it had decreased again to -6.3 percent due to non-shelter price deflation from 2008:Q2 to 2009:Q2 of -2.4 percent which reduced the real value of the 8.7 percent decrease in the HPI.



Source: Quarterly House Price Index, First Quarter 2009, Federal Housing Finance Agency, 2009

By 2009:Q2, cumulative home price appreciation had decreased from the 2007:Q1 high of 512.6 percent to 380.9 percent of 1975:Q1. That theoretical \$100,000 house from 1975:Q1 would now be worth \$480,900, a reduction of \$131,700 (-21.5%) from the all-time peak just over two years earlier. Based on an

extrapolation of the rate of decline in value since the peak, were home price depreciation to continue unabated, existing single-family detached homes would lose all of the real price appreciation that they have gained since 1997:Q2 by 2014:Q3.

About the FHFA's All Transactions House Price Index (HPI)

The All Transactions House Price Index (HPI) is a data series formerly published by the Office of Housing Enterprise Oversight (OFHEO) and now published by the Federal Housing Finance Agency (FHFA), a government agency responsible for overseeing the actions of the Federal National Mortgage Association (FNMA), commonly known as Fannie Mae, and the Federal Home Loan Mortgage Corporation (FHLMC), commonly known as Freddie Mac.³ According to the FHFA, "The HPI for each geographic area is estimated using repeated observations of housing values for individual single-family residential properties on which at least two mortgages were originated and subsequently purchased by either Freddie Mac or Fannie Mae since January 1975."⁴ Data from these two sources cover 40 percent of all mortgages issued in the U.S. Restricting the index to existing housing sales helps to control for the effect that differing housing types and characteristics might have on the data.⁵ To remove the effects that inflation has on home prices, the HPI was adjusted for inflation using the Bureau of Labor Statistics' Consumer Price Index "All Items Less Shelter" series.⁶

As this data is published for states and many Metropolitan Statistical Areas (MSAs) within the U.S., it is useful for tracking housing price trends on the state and local level. One fault with this data set is that it only tracks single-family detached housing, which in Maryland only comprises 52 percent of all housing units (61 percent in the U.S. as a whole). Another is that it doesn't capture the price effects that newly-built homes may have on the housing market until after they have been sold and resold. Even with these faults, the HPI is useful as it supplies consistent data across the U.S. for tracking home price appreciation trends over a 33 year period.

Number of Housing Units by Units in Structure, Maryland, 3-Year 2005-2007 Estimate

	Estimate	Margin of Error	Percentage	Margin of Error
Total housing units	2,296,973	+/-290	100.0%	
1-unit, detached	1,188,547	+/-5,418	51.7%	+/-0.2%
1-unit, attached	483,342	+/-4,804	21.0%	+/-0.2%
2 units	43,419	+/-2,364	1.9%	+/-0.1%
3 or 4 units	56,672	+/-2,496	2.5%	+/-0.1%
5 to 9 units	126,125	+/-3,502	5.5%	+/-0.2%
10 to 19 units	189,099	+/-3,623	8.2%	+/-0.2%
20 or more units	168,771	+/-3,148	7.3%	+/-0.1%
Mobile home	40,826	+/-1,936	1.8%	+/-0.1%
Boat, RV, van, etc.	172	+/-103	0.0%	+/-0.0%

Source: 2005-2007 American Community Survey 3-Year Estimates

³ The Federal Housing Finance Agency (FHFA) was created on July 30, 2008 through a legislative merger of the Office of Federal Housing Enterprise Oversight (OFHEO), the Federal Housing Finance Board (FHFB) and the U.S. Department of Housing and Urban Development (HUD) government-sponsored enterprise (GSE) mission team. FHFA regulates Fannie Mae, Freddie Mac and the 12 Federal Home Loan Banks.

⁴ http://www.ofheo.gov/Media/Archive/house/hpi_tech.pdf.

⁵ For more information, see http://www.ofheo.gov/Media/Archive/house/hpi_tech.pdf.

⁶ Adjusted using series ID# CUUR0000SA0L2 as described in question 17 of the HPI FAQ, available at <http://www.ofheo.gov/hpi.aspx?Nav=60>.

This data set is also related to, but not the same as, the S&P/Case-Shiller® Home Price Indices published by Standard & Poors. There are four major differences between the S&P/Case-Shiller® Index and FHFA's All Transactions Home Price Index. First, S&P/Case-Shiller® uses only purchase prices to calibrate their index, while FHFA's All Transactions HPI uses both purchase prices and refinance appraisals.⁷ Second, S&P/Case-Shiller uses county assessor's data, while FHFA uses data from conforming, conventional mortgages provided by Fannie Mae and Freddie Mac. Third, S&P/Case-Shiller® "value-weights" its index, meaning that more expensive homes have more influence on the index, while FHFA weights all home prices equally. Finally, S&P/Case-Shiller® does not cover 13 states, while FHFA data covers all 50 states. The FHFA created a detailed report that covers the similarities and differences between the two indexes, available at <http://www.fhfa.gov/webfiles/1163/OFHEOSPCS12008.pdf>.

For more information, contact James Palma at jpalma@mdp.state.md.us.

⁷ FHFA has a separate index, the Purchase Only HPI, that uses only purchase price data. That index is discussed in the report *The House Price Index (HPI) for Purchase-Only Mortgage Transactions in Maryland, 1991 – 2009*, also on this website.